

2005 National Leadership Grant
Sample Narrative

Research and Demonstration

The Morikami, Inc.
Delray Beach, FL

*The Effects of Museum Attendance on Elders with
Depression*

Abstract

Project Title: The Effects of Museum Attendance on Elders with Depression

Description of Project Goals and Major Activities: The role of museums will change in the next five to 20 years as 76 million Baby Boomers reach retirement and seek alternative ways to meet their own personal needs. One glaring characteristic of this demographic group (those over the age of 65) is the growing incidence of depression. The primary need being addressed by this research study is to determine whether and how museums can deliberately and intentionally provide programs designed for elders that improve their mental health and overall well-being.

Goals of the project are to:

- Determine whether regularly attending a museum site to walk alone, walk with guided imagery has similar benefits as art therapy for reducing depression in elders.
- Evaluate which program (walking alone, walking with guided imagery, or art therapy) is most effective in reducing depression in elders.
- Disseminate the findings of this study so that museum professionals can make a case for inclusion in the national dialogue of museums as providers of healthful settings, and healthcare providers and elders to increase their choices for achieving improved mental health and well-being.
- Evaluate the potential for incorporating garden-walks for elderly depressed people into the regular programming of a museum.
- Develop a training manual for the guided imagery walk which can be used by other interested museum professionals.

The Morikami Museum and Japanese Gardens will partner with researchers from Florida Atlantic University College of Nursing. The Morikami Museum and Gardens are comprised of a 200-acre site with walking paths through 20 acres of Japanese gardens. Thirty participants will provide informed consent, complete the geriatric depression scale and provide the researchers with the story of their depressive feelings prior to being randomized into one of three arms of the study. **Group 1:** Completes an unstructured walk through the museum garden at their own pace, twice weekly for six weeks. **Group 2:** Facilitated on a garden walk using guided imagery twice weekly for six weeks. **Group 3:** Control Group participates in an art experience twice weekly for six weeks. Each participant will complete a second geriatric depression scale after week three of the study and at the end of the six-week study period. Stories from all participants will be gathered at the end of the six-week period. Focus groups will be held to examine the experience of participant groups at the end of the six-week study period. Focus group data will be analyzed using thematic analysis.

Anticipated Results: The team anticipates at least an equal or better result for groups participating in regular garden walks in comparison to those in art therapy sessions. Dissemination of study findings combined with the online training manual may enable other museums with gardens or outdoor exhibits to offer walks, or to adapt existing programs to increase patronage by elders for improving their health and well-being. Health care providers may want to suggest museum garden walks and participation in art to elder patients with depression.

NOTE: For the purpose of this narrative the word "museum" will include museums with attached gardens or outdoor exhibits/spaces for public use, public stand-alone gardens, arboreta, and/or nature centers.

1. Assessment of Need:

The role of museums will change in the next five to 20 years as 76 million Baby Boomers reach retirement and seek alternative ways to meet their own personal needs. This extreme demographic shift will have repercussions for communities that now attract a large number of elder retirees. One glaring characteristic of this demographic group (those over the age of 65) is the growing incidence of depression and its physiological consequences of life threatening diseases, as well as the impact on families and communities that care or will care for those with this ubiquitous, concealed mental illness. The primary need being addressed by this research study and demonstration project, "The Effect of Museum Attendance on Elders with Depression," is to determine whether and how museums can deliberately and intentionally provide programs designed for elders that improve their mental health and overall well-being.

South Florida has a large and growing geriatric population contributing to both the need for and feasibility of this study. Current demographics indicate that elders comprise 49.4% of Palm Beach County residents, 36.7% of Broward County residents, and 27.8% of Martin County residents. (These three counties provide The Morikami with half of its 140,000 visitors annually.) The prevalence of major depression among older adults over 65 years of age is approximately 15% nationally. Add to this percentage those elders who have serious co-morbid conditions such as diabetes, hypertension, emphysema, and osteoarthritis and the prevalence increases to 25%. Suicide in elderly men is secondary to major depression and occurs at a rate of 12 per 100,000 which is five times the national average (National Institutes of Health 2004). Among elders, depression can be caused by social isolation occurring through the loss of friends, relatives and loved ones, and also through debilitation resulting from chronic disease. Depression in later life has serious consequences including patient and caregiver distress, exacerbation of existing diseases, cognitive disorders, increased health care costs, and increased mortality related to suicide and mental health issues (Reynolds & Kupfer, 1999). The relationship between geriatric depression and non-suicidal mortality is well supported for myocardial infarction, where depression elevates the mortality risk by a factor of 5 (Frasure-Smith et al 1998).

The research and demonstration project serves multiple audiences, as shown in the chart below, primarily through increased knowledge as well as through direct service.

Project Audiences / Needs / Benefits

Audience 1. Elders with depression, including Baby Boomers retiring in the next 10 years

Needs:

- Alternative resources for reducing depression beyond medication

Benefits:

- Evaluation results that support use of museum gardens, nature centers, arboreta and other public gardens for the intended reduction of depression symptoms.

Audience 2. Museum professionals, Nature Center/Botanical Garden professionals

Needs:

- A case for initiating specialized programs to reduce effects of depression in elders.
- Specific program guidelines for improving the mental health of elders through museum, garden or nature center visits.

Benefits:

- Proven outcomes for how museums, gardens, and nature centers can be sites that intentionally contribute to the well-being and health of elders.
- Case for increased participation and funding for such purposes.
- Model program guidelines in a manual that can be used by museum professionals to implement their own mental health improvement programs.

Audience 3. The Morikami Museum Staff and Docents

Needs:

- Evidence that substantiates the many comments received from museum visitors that their visits to The Morikami have provided them with personal inner-peace and enjoyment that has improved their well-being, overcome their grief or loss, or contributed to their ability to deal with life threatening illnesses.
- Specific programs that can provide outcomes of improved mental health and well-being at the museum for visitors seeking these specific outcomes.

Benefits:

- Partnership with research institution with qualified professionals committed to exploring alternative ways for using museum settings for improved health.
- Trained staff and docents that can continue providing programs that improve mental health and well-being for visitors seeking this outcome.

Audience 4: Gerontologists, Nonprofits focused on serving seniors with mental health issues and medical associations

Needs:

- Data that supports alternatives or enhancements to treating depression in elders beyond medication, specifically at museums with outdoor exhibits or gardens, nature centers, or arboreta.

Benefits:

- Evidence that prescribing “intentional” visits to museums, nature centers or arboreta can significantly reduce depression in elders. Knowledge of the program components that produce these effects.

The project was developed by research faculty at the Christine E. Lynn College of Nursing at Florida Atlantic University and program staff at The Morikami Museum and Japanese Gardens. The Morikami's garden environment will be used for a study that will examine the effects of walking through a museum garden, in comparison to art therapy, on elders experiencing depression. The Morikami was determined to be the best site for performing the study project due to it's: A) close proximity to the university (7 miles); B) the many FAU faculty and students who frequent the museum for cultural and scholarly enrichment and research; C) the extensive, open outdoor area and gardens; D) the beauty and comfort afforded by the gardens, and their capacity to create relaxation and stress reduction experienced by faculty team members and many museum visitors. When the team preliminarily searched research databases and search engines, no information regarding the use of museums as sites for improving health and well-being was found beyond current horticultural therapy programs—of which there are hundreds—which emphasize the act of gardening as a means for proven therapeutic outcomes. The research did however validate that distraction therapies have been shown to be beneficial in reducing the pain associated with loneliness and hopelessness often experienced with depression (Arnow et al. 2004). Cognitive Behavioral Therapy (CBT) such as meditation, contemplation, guided imagery, and cognitive behavioral restructuring helps people distinguish between problems that can and cannot be resolved, and helps them develop better coping skills (Tang & DeRubeis, 2001). A large body of evidence (>1000 trials) relates increased exercise to decreased depression (Brosse et al 2001). A meta-analysis of 80 studies produced an overall mean exercise effect size of -0.53 (range, -3.88 to 2.05) (McNeil et al, 1991) for depression suggesting that the depression scores decreased by approximately one half of a standard deviation more in exercise groups than comparison groups comprising the meta-analysis data set. The antidepressant effect of exercise occurred with all types of regular exercise, independent of gender or age, and it increased with the duration of therapy. The exercise need not be aerobic; just getting people to increase activity promises to affect overall mood (Fischer et al., 2003). Further, it is known that spending time outdoors in contrived or natural garden settings provides for and gives “life to a wounded or dying soul through their ability to invigorate mental stimulus and one's connection to nature.” (Scarfone, 2002)

Based on this research, the faculty team developed a research project in partnership with The Morikami to test the hypothesis: Elders with depression regularly attending museums for the intended purpose of improving their mental health and well-being will succeed when provided with one or more of the following:

- Guided imagery activities in a museum setting
- Walks outdoors in a museum setting
- Art therapy
- Other directed activities discovered as a result of the study gathered from participant feedback and professional observations.

2. National Impact & Intended Results:

According to AAM, museums working in the public interest serve as **centers of learning** through exhibitions, collections and programs based on research and scholarship. Almost 9 out of 10 Americans (87%) find museums to be a reliable source of information among a wide range of topics. Most museums concentrate on serving youth with specific programs. As **civic institutions** museums have deeply rooted community connections. Museums are also **protectors of information and collections** regarding artistic, historic, scientific and cultural heritage. Museums serve as **key partners in travel, tourism and recreation**. Finally, AAM notes that museums play major roles in **attracting and retaining business activity**.

However, museums are not known for their role as sites where healing can take place, especially for the growing number of elderly visitors. The field collectively lacks trained professionals required to measure impact of programs or exhibitions on the health or mental health of visitors in general or those with specific or various disabilities. A recent article in *The Public Garden* indicates that, "The pressure to evaluate programs in terms of their contribution to overall societal needs is coming from the broader interest that community leaders (e.g. political leaders, funders, organization managers) have in the combined effects of informal learning. As might be expected these benefits are the most ticklish of all outcomes to measure (e.g., attribution of cause and effect is very difficult to track in most instances); yet they are increasingly the most important of all outcomes from a public accountability perspective. When we demonstrate the value of informal learning efforts, it is likely that funding and participation will increase."

Traditional roles for museums serving elders, as observed first hand by The Morikami Museum staff and in visitor surveys and focus groups, remain in the realm of providing 1) adult educational programs for hands-on learning through structured class curriculum on-site or through outreach opportunities; 2) increasing numbers of group tours; 3) volunteer or board member opportunities; or 4) an interesting and serene place for occasional visits—especially while hosting out-of-town guests.

As Baby Boomers (76 million) reach retirement age, the competition for attracting this demographic will be significant. To adequately prepare to attract and serve these new seniors who will be searching for ways to utilize their new-found discretionary time, museums must investigate new roles that will become more closely aligned with Baby Boomer values and needs. Additionally, the field will require case statements and marketing messages that build on sound research for convincing this generation—one that boasts diverse characteristics from a high degree of self-reliance to those who are anxious about the future or are struggling to make ends meet, economically (AARP, 1999)—that their time in museums can provide meaningful results for adding value to their quality of life, that goes beyond traditional museum roles. The question becomes, how can museums serve aging Baby Boomers in ways that align with their future needs for service?

National Implication: If our team's hypothesis is correct, this project has the potential for providing scientifically validated data that demonstrates the usefulness of museums to the community, especially elders within the community. Research analysis and findings will be carried out according to professional/medical research standards to ensure validity and applicability to the museum field as well as use by health professionals. Results will be determined by using traditional statistical analyses comparing study groups of individuals, all diagnosed with depression and prescreened for participation. The scientific quality of these investigative methods and projected outcomes will make it possible for museums- specifically traditional botanical centers, nature centers, sculpture gardens, museums with outdoor exhibit spaces, display gardens, historic landscapes, zoos, and campus arboreta_ to become part of a national dialogue that addresses a need for a wider range of therapy choices when treating elders. Although there is no method or resource to know precisely how many institutions of these kinds serve the public, at least 500 are members of the American Association of Botanical Gardens and Arboreta. The study project will explore ways for such museum

institutions to make it possible for elders to consider therapy options that do not require pharmaceuticals for those elders increasingly searching for alternative solutions to their health needs, and also for future Baby Boomers more interested in self-directed solutions to their own health needs.

Data Driven “How To” Training Manual: FAU faculty and The Morikami education department staff plan to create guidelines for program options that will serve as training tools for museum staff and docents as they focus on providing therapeutic programs for elders. The manual will be posted on The Morikami Museum’s website for broad usage.

3. Project Design and Evaluation Plan:

The study will take place at The Morikami Museum & Japanese Gardens in Delray Beach, Florida, which features a 200-acre park with walking paths through 20 acres of Japanese-style gardens, the Gulf Stream Bonsai Collection (largest public tropical bonsai exhibit in the country), koi ponds and waterfalls, with places to sit and reflect.

Goals of the project are to:

- Determine whether regularly attending a museum site to walk alone, or walk with guided imagery has similar benefits as art therapy for reducing depression in elders.
- Evaluate which program (walking alone, walking with guided imagery, or art therapy) is most effective in reducing depression in elders.
- Disseminate the findings of this study so that museum professionals can make a case for inclusion in the national dialogue of museums as providers of healthful settings, and healthcare providers and elders to increase their choices for achieving improved mental health and well-being.
- Evaluate the potential for incorporating garden-walks for elderly depressed people into the regular programming of a museum.
- Develop a training manual for the guided imagery walk which can be used by other interested museums.

Study Participants for this project will come from Palm Beach and Broward counties in Southeastern Florida, communities with a large elderly population. Many of these elders have left family and lifelong communities to retire to Florida and may therefore experience depression at a higher level than in other communities. The study will welcome both depressed elders currently taking anti-depressants, and those who are medication-free.

Institutional review approval for this project will be sought from the Florida Atlantic University Institutional Review Board. Dr. Meir Cohen will assist with the recruitment of participants from his own geriatric practice and from the practices of other physicians from the Boca Raton, Delray areas. Flyers at senior citizen centers and other public buildings will also be used to recruit participants. Both physicians and nurse practitioners will be able to refer depressed elders for inclusion in the research project.

Summary of Study Design and Methods: The study project will use a randomized design to examine the effects of garden walking on depression in elders. Thirty elders will be recruited and will be randomly assigned to one of three groups. Inclusion criteria are: age over 65, ability to walk one mile, being cognitively intact, medical diagnosis of depression. Each individual participant will be interviewed by the research staff to determine if they meet inclusion criteria. If inclusion criteria are met, participants will be informed about the study and asked to sign consent forms. They will then complete the geriatric depression scale. Before assignment to an intervention group, participants will be asked to share their “story of sadness” with a research assistant. These stories will be audio taped for transcription and analysis.

Both walking groups will meet at The Morikami at 9:30 am before the Museum and Gardens open to the public, on alternating days of the week. The walk is planned to require an hour of time whether with or without guided imagery. The walking groups will convene at the Museum at 9:20 am and will be met by the principal investigator (walk alone) or the project director (walk with guided imagery). The art therapy group will convene at 9:30 am in a room used by the Initiative for Intentional Health at Palm Beach Community College and will last one hour. Each intervention will occur twice weekly during the six-week intervention period.

Study Project Details:

Group 1 The first group will walk through the gardens without on-going walking guidance after their first walk. The first walk will be led by the principal investigator to familiarize the elders with the path. From then on, the group of participants will be met by the principal investigator and instructed to spend about one hour in the garden, checking with the principal investigator to let her know that they have completed the walk. Participants will be encouraged to walk at their own pace and stop as needed for rest and reflection. They may or may not want to speak with others in their group. Walking time will be recorded for each participant.

Group 2 The second walking group will move through the gardens with the project director who will use guided imagery to call attention to the garden experience. The guided imagery script will be approved by Hoichi Kurisu, master Japanese Garden designer and a consultant on this study prior to use in the intervention. In this instance, the group will all stay together throughout the walk, sit and rest at appropriate intervals and listen to the guided imagery script. The project director will record the length of time for each walking session at the completion of the session.

Group 3 Group three will participate in an art therapy program. This group is a control group. It is well documented that art therapy reduces depression in elders; therefore comparing results of art therapy in depressed elders to the two groups that walk in the garden will allow the team to conclude whether or not similar benefits occur for these other groups. During the first session, each participant will be asked to draw a time line showing themselves as young adults, as middle aged, and as seniors. During the 2nd through 5th sessions the group will be directed to draw how they would like to change anything in their time line image and/or elaborate on what was very good about that time. The last session will be a review for each participant to look at their series of drawings and discuss them. The art therapist will complete an individual report of their participation and the evaluation of the drawings.

Intervention Groups (10 Per Group)	Activities	Person Responsible
Group One	Individual unguided walk through Morikami Museum Gardens	Ruth McCaffrey, Principal Investigator
Group Two	Guided imagery walk through gardens	Chris Driscoll, Project Director
Group Three	Art – Open Studio Group	Myra Levick, Art Therapist

Depression Instrument: The geriatric depression scale is a 15-item scale developed by Brink & Yesavage in 1983. The scale is in the public domain due to receiving federal support. The reliability and validity of this instrument has been well established through multiple research trials since 1984. The instrument has been translated into 13 different languages and is used around the world as a tool for self-evaluation of depression in elders.

Measuring Depression: The geriatric depression scale will be used to assess depression. The scale is suitable for use as a screening test for depressive symptoms in the elderly and is ideal for evaluating the clinical severity of depression, and therefore for monitoring treatment. It is easy to administer, needs no prior psychiatric knowledge and has been well validated in many environments (Yesavage et al. 1983). The geriatric depression scale will be administered three times by the research assistant. Each participant regardless of group assignment will complete the geriatric depression scale during the initial interview before they are randomized to group, after three weeks of intervention and after completing the six week study period. Significance will be determined by analyzing the mean scores of each of the three geriatric depression scales completed by participants to establish any reductions in depressive symptoms and comparing the mean scores of each group at each time period to establish which intervention obtained the greatest reduction in depression symptoms.

Story-Gathering Method: Stories of sadness will be collected for each participant prior to random assigning to study group and after completion of the six-week intervention period. Stories have an important place in the human health experience. By having people tell us about their challenge of facing sadness in their everyday lives, before and after the intervention phase of the study, it will be possible to distinguish differences in the

stories over time and for each intervention (walk alone; walk with guided imagery; art therapy). The positive and negative emotion and the cognitive word categories, which have been associated with health in previous studies, will be used in this analysis. Story dialogues will be guided by questions which ask participants to: 1) consider their current experience of sadness (focus on the present); 2) how life challenges from the past contributed to their sadness now (focus on the past); 3) and, how they see their sadness changing over time (focus on the future). This process is guided by Story Theory and follows the story path method outlined by Smith and Liehr (2003). Patricia Liehr, a collaborator on this study, will train a research assistant to gather the stories about sadness and all stories will be tape-recorded. Stories about sadness will be collected from each individual participant upon entry into the study and at the final data collection point when finished with the intervention phase of the study. It is expected that the story dialogues will take no longer than 20 minutes for any participant. Dialogues will occur in a quiet private room at the study site, where the intervention occurred.

Tape recordings of the stories of sadness will be transcribed and prepared for analysis with Linguistic Inquiry and Word Count (LIWC) software (Pennebaker, Francis & Booth, 2001) by the research assistant. The LIWC program is a word-based computerized text analysis software, which discerns 72 linguistic categories, including structural elements (word count and sentence punctuation), affective, cognitive, sensory and social process words; and, words which reflect relativity and personal concerns. The psychometric properties of the word categories has been extensively tested using reliability analyses, panels of judges, factor analysis methods and criterion related validity procedures (Pennebaker & King, 1999). The LIWC program reports word-use in percentages, indicating the number of words.

Focus Group Data Collection: Focus group interviews will be undertaken with each of the three groups when the intervention is complete to enhance understanding of the experiences participants had during the project period and how those experiences affected their depression. Focus group sessions will also explore how this museum/garden experience fit into participant's everyday lives and what could be done to make the experience more appealing to community members.

Data Analysis Chart

Data Collection	Time when data will be collected	Method of analysis	Data will be used
Geriatric Depression Scale	<p>The scale will be completed by each participant three times.</p> <ol style="list-style-type: none"> 1) Immediately after signing consent 2) After three weeks of the study period 3) At the end of the study period 	<ul style="list-style-type: none"> ▪ Compare mean scores of the scales two ways. ▪ Was there a change in mean scores from the beginning of the study to the end for each individual participant? ▪ Were there overall changes between the experimental and control groups? 	<ul style="list-style-type: none"> ▪ Data will tell us if depression was improved by the intervention of walking in the garden or the art therapy

Data Collection	Time when data will be collected	Method of analysis	Data will be used
Data From Stories and Art Therapy	<ul style="list-style-type: none"> ▪ Story data will be tape recorded at the same time as the first geriatric depression scale and again at the end of the six week study ▪ Art data will be collected throughout the six week period for the art therapy group 	<ul style="list-style-type: none"> ▪ Data from stories will be analyzed using the Pennebaker's Linguistic Inquiry and Word Count (LIWC) software. ▪ Art will be analyzed by Myra Levick PhD, Art Psychotherapist. 	<ul style="list-style-type: none"> ▪ Data will be used to determine changes in word usage in stories between pre-intervention stories and post-intervention stories, ▪ Dr. Levick will examine changes in self-drawings between initial drawings and drawings after the six week intervention of art therapy
Focus Group Data	<ul style="list-style-type: none"> ▪ Each group will have a separate focus group meeting to discuss their feelings about the intervention they received. 	<ul style="list-style-type: none"> ▪ Focus group discussions will be tape recorded and analyzed for thematic material 	<ul style="list-style-type: none"> ▪ To determine the effect of each intervention from the point of view of the participants in the study.

Evaluation of Training Manual: Following completion of the training manual, the project director will train The Morikami's staff to utilize the manual for conducting their own group walks with a group of elders with depression, which will provide additional improvements to the training manual and ensure process can be replicated using museum staff. The education staff will then train docents, while being observed by the project director, to ensure staff are qualified to train others. Docents will then lead a group of elders with depression, while being observed by both education staff and project director. This process will essentially validate the training manual's effectiveness for training and training the trainer processes.

4. Project Resources: Budget, Personnel, and Management Plan.

Evidence of Previous Project Management: The Morikami Museum has history of initiating and completing new projects utilizing outside funding sources in the past several years. The following provides a sampling:

- \$4 million garden installation in 2001;
- completion of "Kamishibai" story telling picture cards of George Morikami's immigrant story (\$30,000-Palm Beach County) in 2002;
- self-produced exhibition featuring objects from the permanent collection for the 25th anniversary celebration plus catalogue production (\$20,000-Takahashi Charitable Foundation and Burke Foundation, 2002);
- digitization of permanent collection for six Virtual Japanese Museum exhibitions to be launched in autumn 2005 (\$340,000-Freeman Foundation);
- first commissioning of 25 paper sculptures by Michael LaFosse, origami master sculptor to be exhibited in spring 2005 and then traveling to other museums, nationally (\$43,000-NEA and Palm Beach County Cultural Council);
- year-two of planning for Resource Center on Japanese Culture for Florida Educators, a statewide network for providing ongoing support (\$13,000-Florida Arts Council);
- year-one endowment challenge grant-successfully raised \$500,000 toward \$1.5 million goal (\$500,000-NEH, 2004).

The project was developed by a multi-disciplinary team of researchers, program staff from The Morikami, and master Japanese Gardens designer, Hoichi Kurisu as shown in the chart below.

Team	Qualifications / Commitment	Role on the Team
Ruth McCaffrey	ND, ARNP-BC (Nursing Doctorate, Advanced Registered Nurse Practitioner - Board Certified); Assistant Professor Christine E Lynn College of Nursing, FAU Director Initiative for Intentional Health • 10% commitment for one year	Principal Investigator; Oversees conduct, ethics and protocols; Handles participants' questions/problems; Facilitates Group One; Co-writer of research results; Presenter of kick-off/process and findings at symposium; Presenter at museum conferences
Christine Driscoll	MS; Managing Director, Initiative for Intentional Health; Instructor at the Harvard Mind-Body Institute • 40% commitment for one year	Project Director & Guided Imagery Group Leader; Presenter of kick-off/process and findings at symposium; Co-writer of research results; Co-producer of training manual; Evaluator of training process for museum staff and docents
Patricia Liehr	PhD, RN; Associate Dean for Nursing Research and Scholarship, Christine E. Lynn College of Nursing; Collaborator on study • Cost share: 5% commitment for one yr	Design consultant; Oversight of stories of sadness methodology and training of research assistant for story gathering; Co-writer of research results
Myra Levick	PhD; Registered Art Therapist • 28 hours @ \$100/hour	Leads art therapy program with group 3; Co-writer of research results
Research Assistant	Graduate Student in the College of Nursing, yet to be determined • 20 hrs/week @ \$18/hr for 52 weeks	Recruitment/ Obtaining informed consent; Completing the Geriatric Depression Scales Obtain story telling data; Data Entry; Analyze story telling data; Dissemination of findings
Meir Cohen	M.D. Internal Medicine/Geriatician; Medical Director for the Initiative for Intentional Health • 12 hours @ \$150/hour	Recruitment of study participants; Reviews written findings; Dissemination of findings at symposium
Tom Gregersen	Interim Museum Director, MA in Japanese Studies; 28 years of curatorial, scholarly research, public speaking presentations and publication production specifically on Japanese humanities' topics. • Cost share: 60 hours @ \$38/hour	Presenter of kick-off/process and findings at symposium, and at museum conferences; Producer of articles for state and national museum-related journals and publications
Reiko Nishioka	Director of Education, MA in Museum Leadership; 18 years of public education program design specializing in Japanese culture and public presentations; created nationally recognized self-guided docent training program. • 200 hours @ \$35/hour	Study Program Coordinator; Co-producer of training manual; Presenter of findings at symposium, and at museum conferences Trainee and trainer of docents to replicate program-related activities according to training manual
Beth Kawazura	Schools Programs Specialist; BA in Elementary Education, Teacher of the Year Award-Dade County; 7 years teaching in Japan, 8 years developing museum and cultural curricula for youth. • 120 hours @ \$28/hour	Co-producer of training manual; Trainee and trainer of docents to replicate program-related activities according to training manual
Erin Molloy	Director of Marketing; BA in History & Criticism of Art; 8 years marketing and special events management for cultural institutions and City of Delray Beach. • Cost share: 40 hours @ \$33/hour	Oversees media dissemination, public presentation to kick-off project and recruit participants, symposium on site at The Morikami, website communication about study and redesign to post training manual online.

Team	Qualifications / Commitment	Role on the Team
Hoichi Kurisu	BA in English Literature; Master Japanese Garden Designer (37 years), recognized by national associations for landscaping and environmental improvement, twice at the White House. • 20 hours @ \$100/hour	Approves script for guided imagery; Approves training manual; Reviews written findings; Presents at initial public presentation, and findings at symposium
Michelle Brown	BS in Journalism; Journalist and PR consultant for 14 years • Cost share: 60 hours @ \$85/hour	Implement PR campaign for promoting study results and encouraging elders to attend museums regularly

Additional cost-sharing expenses provided by The Morikami:

- Two public programs attracting 200 attendees each (introduction of study project and kick-off; one symposium to present findings) \$1,600 for facility use to include lobby area and theater; plus staffing and coordination beyond what is listed above for equipment use, technical production, custodial time, registration, and security: \$4,700.
- Admissions for 20 study participants: \$1,920
- Family memberships given as incentives to all participants: 30 participants @ \$75 each: \$2,250

Benefits for The Morikami:

- Increased exposure for its leadership role in the development of health and healing programs within museums.
- Future opportunities to partner with Lynn College of Nursing on other projects related to museums and healing.
- Marketing of study results to leverage the use of “prescriptions” for museum memberships for patients suffering from mental illnesses like depression.
- Increased attendance, especially repeat visits, for those seeking relief from stress and depression.
- Increased revenue from admissions and memberships as well as other amenities provided at the museum.
- Potential for creating a train the trainer program for museum educators on how to program for visitors seeking increased well-being. This could also generate additional funds to continue delivering the program.

Benefits for Christine E. Lynn College of Nursing at FAU:

- Aligns mission of commitment to nurturing wholeness of persons and the environment of caring.
- Supports goal of encouraging non-invasive, safe interventions to improve quality of life for all persons
- Increased nursing knowledge about treating elders with depression using local museums and gardens.
- The College of Nursing building at Florida Atlantic University has a healing garden used by nursing students and faculty that could be used to provide interventions for elders with depression based on the data collected from this study.
- The College of Nursing also manages the Lou and Annie Green Center for Alzheimer’s research. This center has a garden and nursing interventions could be developed based on the outcomes of this study for patients with Alzheimer’s disease and their family members and caregivers.

5. Dissemination:

Dissemination will be undertaken by both The Morikami staff and personnel from the Christine E. Lynn College of Nursing, ensuring that representatives from each organization contributes to and participates in both written and oral presentations regarding the study project, findings and implications for the museum fields. As part of the study project, the team plans to hold two public presentations in The Morikami’s theater to 1) introduce the study project and as one method to recruit participants; and 2) to formally present the research

findings. The team expects at least 200 participants at each presentation. The Morikami's marketing department will coordinate these presentations, targeting: media, nonprofit organizations working in health and human services; museum, gardens, and nature center professionals and their elder volunteers from the more than 30 organizations in Palm Beach County; funders of health and human services; and local medical professionals working with elders in their practice. For national outreach opportunities, the team plans to submit proposals for presenting study project findings in both workshops and guest speaker formats at annual conferences of the American Museum Association, Florida Association of Museums, National Docents Symposium, and the American Association of Botanical Gardens and Arboreta or its Southeast Regional Conference. The team also plans to present findings at local workshops presented by the Palm Beach County Cultural Council, ArtServe in Broward County, Museum Educators of Southeast Florida, and Dade Cultural Affairs Council. The Christine E. Lynn College of Nursing faculty plans to submit proposals beyond those listed for museums, to the National Holistic Nursing Association conference, the International Association for Human Caring Conference and other appropriate conferences.

Beyond posting the training manual and research findings online at The Morikami's website, morikami.org, the team plans to submit articles for online links and for publication to the following journals: Museums; Public Gardens; Journal of Japanese Gardens; Curator – The Museum Journal; and other appropriate publications. Likewise, the Christine E. Lynn College of Nursing faculty plans to submit articles for publication to the Holistic Nursing Practice Journal where Dr. McCaffrey is a member of the editorial board, the Journals of Complementary and Alternative Therapies and other appropriate journals, the expense for which is not included in the funding proposal. The Morikami also plans to undertake an extensive local and regional public relations campaign to promote research results to encourage regular visits to museums like The Morikami for healing and restorative purposes, targeting elders and Baby Boomers through travel, wellness, and other appropriate publications/media.

6. Sustainability: *Describe how the applicant will continue to support the project or its results beyond the end of the grant period.*

The Morikami plans to utilize the training manual and professional training from the Christine E. Lynn College of Nursing faculty to continue providing programs for elders seeking improved health and well-being. A marketing plan has been under development to target publications reaching elders that are residents and also part-time residents of the county; as well as tourists (approximately 70,000 visitors to The Morikami are tourists or part-time residents less than six months annually). Media releases will focus on research findings and a program specifically designed for elders suffering from depression. Other ideas for continued programming and funding include train the trainer programs for other museum educators interested in using their museum or outdoor site for similar purposes. The Morikami plans to share findings with five prominent funders in Palm Beach County focused on funding healthcare and/or elder issues: Alleghany Franciscan Foundation; Area Agency on Aging; Community Foundation for Palm Beach & Martin Counties; Palm Healthcare Foundation; and Quantum Foundation. We anticipate that funding to develop and implement additional health-related programs at The Morikami will be forthcoming as a result of research findings. Additionally, increased memberships and admissions resulting from marketing and promotion of the museum as a resource for improving health and well-being is also expected to sustain these types of programs. The team anticipates continued requests for presentations of findings and the program model, especially here in South Florida where the population of elders continues to grow.